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Project of multi-purpose optical tracking system

Diana Haritonova, Inese Janpaule, Augusts Rubans, and Ansis Zarins Institute of Geodesy and Geoinformatics, University of Latvia

Current status of a new optical astrogeodetic instrument design project is reported. The instrument is intended for both ranging and positional observations of satellites, space debris and near-Earth objects (NEO). It includes twin 42 cm off-the-shelf optical systems on an Alt-Alt mount. One optical system will be dedicated to SLR functionality – fitted with transmitted beam collimator and reflected pulse detector. The other optical system will have CCD matrix for simultaneous image acquisition, it can be used either for visual tracking purposes or for astrometric position determination. Other combinations of measuring equipment are possible. Intended positioning accuracy is within a few arcseconds to ensure accurate tracking of satellites for SLR purposes. Operational tests are expected to start in the end of 2015.